

REMARKS

A. Introduction

The present Amendment is in response to the Examiner's Office Action mailed June 23, 2005 (the "Office Action"). Claims 1-29 were pending. Claims 1 and 15 are amended. New claims 30-32 are added. Claims 1-32 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicants' remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants' understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

B. Confirmation of Provisional Election

Applicants confirm the provisional election made without traverse by Applicants' representative on June 10, 2005, to prosecute the invention of group I comprising claims 1-15 and 22-29. Applicants further acknowledge that claims 16-21 are withdrawn from further consideration.

C. Objections to the Drawings

The drawings are objected to by the Office Action for failing to show every feature of the invention specified in the claims. In particular, the drawings are objected to for failing to show an x-ray absorptive plating and a stator covered over its entirety, pursuant to claims 4 and 29. In response, Applicants have amended Figure 7 of the drawings to include a stator 150 covered over its entirety, as well as a specified location 160 for an x-ray absorptive plating.

Applicants submit that no new matter has been added as a result of the amendments to Figure 7. Indeed, support for the above-mentioned changes is found at least in paragraphs [045] and [072] of the specification. These paragraphs have been amended to include appropriate reference to Figure 7. For the Examiner's convenience a replacement sheet including amended Figure 7, together with an original sheet of Figure 7 showing the changes made in red ink, is included as an attachment following page 19 of this Response. Entry of these drawing amendments and removal of the objections to the drawings is therefore respectfully solicited.

D. Objections to the Claims

The Office Action objects to claims 4 and 29 for including matter not depicted in the figures. In response, Applicants have amended Figure 7 to include the subject matter of objected-to claims 4 and 29, *i.e.*, a stator covered over its entirety, and a possible location for placement of an x-ray absorptive plating on the encapsulated stator. As has been discussed above, no new matter has been added as a result of these drawing amendments. Removal of the objection and allowance of these claims is therefore respectfully requested.

E. Rejections Under 35 U.S.C. §103

The Office Action rejects claims 1-15 and 22-29 under 35 U.S.C. § 103(a) as being unpatentable by United States Patent No. 6,487,273 to Takenaka *et al.*, ("*Takenaka*") in view of U.S. Patent No. 5,079,466 to Jones. However, *Takenaka* and Jones -- assuming *arguendo* that these and the other references cited herein qualify as prior art -- fail to teach or obviously suggest each and every element of the pending claims and thus do not make obvious the present claimed invention.

Takenaka generally discloses an x-ray tube having a single integral housing. In detail, Figure 4 of *Takenaka* teaches an x-ray tube assembly 110 having a single integral housing 112 comprised of first and second envelope portions 114 and 116 that contain an anode assembly 118 and a cathode assembly 120. A stator 128 is disposed about the integral housing at a point proximate to a rotor 126 of the anode assembly. A potting material 106 is interposed between the outer periphery of the stator and the inner surface of an airflow shell 152. An airflow path "A" is also directed between an inner periphery of the stator and a stator shield 170 by an air diverter 210 to assist in heat removal from the stator. See *Takenaka*, col. 11, ll. 19-31; col. 13, ll. 14-30; col. 14, ll. 1-5; ll. 39-52; ll. 58-62; Figure 4.

Jones, the second cited reference, generally discloses a method and apparatus for supporting a stator and rotor of a motor. In particular, *Jones* teaches a motor 30 having an outer rotor 32 and inner stator 34. An L-shaped support member 50 is coupled to the stator 34, while an L-shaped support member 52 is coupled to the rotor 32. An elastomeric material is employed to form coupling joints 58 and 60 between the L-shaped support members and the stator and rotor. The L-shaped support member 50 can be bolted to a motor frame or housing, while the

support member 52 can be bolted to an apparatus to be driven. *See Jones*, col. 3, l. 64 – col. 4, l. 68; Figures 3, 4.

The claimed invention is substantially distinct from a device taught or suggested by *Takenaka* and *Jones*. In particular, amended independent claim 1 requires, in an encapsulated stator assembly, the presence of “a stator having a core and a plurality of windings, the stator defining an inner periphery; and a covering portion that forms at least a partial covering over the stator, the covering portion including an outer surface that compressively engages with a portion of the stator-driven device to secure the stator in the stator-driven device, the covering portion *further covering a portion of the inner periphery of the stator.*” Neither *Takenaka* nor *Jones* teaches or suggests such a device. Indeed, the potting material 106 interposed between the outer surface of the stator 128 and the airflow shell 152 in Figures 4-6 of *Takenaka* is notably omitted from the region between the inner periphery of the stator and the stator shield 170. This is not surprising given the fact that this region should remain clear in order to enable cooling air to flow past the stator via the airflow path “A” so as to remove heat from the stator. *Jones* also fails to teach a covering portion for both an outer surface and an inner periphery of a stator.

Further, any inference that *Takenaka* and *Jones* could be combined to teach a covering portion on an inner periphery of a stator would compromise *Takenaka*’s aim of air cooling the stator because this would undesirably restrict the airflow path “A” defined between the stator’s inner periphery and the stator shield. Thus, even a combination of these references fails to teach or obviously suggest each of the elements of the claimed invention required by claim 1.

Independent claims 9 and 22 contain similar limitations that are also not found in the cited references. In particular, independent claim 9 discloses an x-ray tube having an encapsulated stator assembly, comprising “a stator that is positioned about the rotor assembly,

the stator being substantially enveloped by a covering portion that is configured to secure the stator within the outer housing.” Independent claim 22 similarly discloses an x-ray tube with an encapsulated stator assembly that requires a stator and “a resilient covering portion *that envelops the stator. . . .*” As was the case with claim 1 above, neither *Takenaka* nor *Jones* teaches or suggests a stator that is enveloped by a covering portion, and as such these references fail to make obvious the present claimed invention.

Additional differences exist between the present claimed encapsulated stator assembly and the devices taught by the cited references. For example, as has been explained the encapsulated stator assembly of amended independent claim 1 further requires that the covering portion include “an outer surface that compressively engages with a portion of the stator-driven device to secure the stator in the stator-driven device” Yet *Takenaka* fails to teach this limitation, as it explicitly states that its *air diverter* 210 is “used to structurally support the stator 128,” *Takenaka*, col. 14, ll. 59-60. *Jones* also fails to meet this criterion, as its elastomeric material couples only to one of the L-shaped support members 50 or 52, not to the stator-driven device itself. *See Jones*, col. 4, ll. 43-45.

In consequence of the above discussion, therefore, Applicants submit that *Takenaka*, either alone or in combination with *Jones*, fails to teach or obviously suggest each and every element of independent claims 1, 9, and 22 and thus fails to make out a *prima facie* case of obviousness with respect to this present claimed invention. Further, inasmuch as claims 2-8, 10-14, and 23-29 are variously dependent on one of the independent claims 1, 9, and 22, they are also allowable for at least the reasons given above. Applicant therefore respectfully submits that each of the above claims is patentably distinct and requests that the Section 103 rejection in view of *Takenaka* and *Jones* be withdrawn.

F. Allowable Subject Matter

The Office Action objects to claim 15 as being dependent upon a rejected base claim, but states that the claim would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. In response, Applicants have rewritten claim 15 in independent form to include all the limitations of independent claim 9 from which it formerly depended. Removal of the objection and allowance of claim 15 is therefore respectfully requested.

Applicants submit the following comments regarding the Examiner's statements of reasons for the indication of allowable subject matter in the Office Action. Applicant agrees with the Examiner that the claimed invention of claim 15 is patentable over prior art, but respectfully disagrees with the Examiner's statement of reasons for allowance as set forth in the Office Action. Applicants submit that it is the claim as a whole, rather than any particular limitation, that makes each of these claims allowable. No single limitation should be construed as the reason for allowance of a claim because it is each of the elements of the claim that makes it allowable. Therefore, Applicant does not concede that the reasons for allowable subject matter given by the Examiner are the only reasons that make, or would make, the claims allowable and does not make any admission or concession concerning the Examiner's statement in the Office Action.

G. New Claims

Applicants submit that new claims 30-32 are also allowable over the cited art. In particular, new independent claim 30 discloses a stator assembly having a stator that defines an outer periphery and an annular inner periphery, and "a compressive covering material that covers

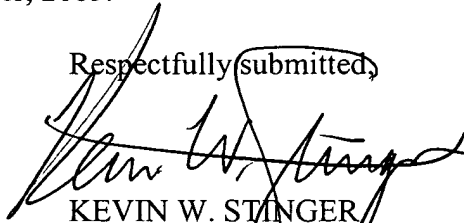
at least a portion of both the outer periphery and the inner periphery.” As has been described in connection with claim rejections under Section 103, both Takenaka and Jones fail to teach or obviously suggest a stator assembly such as that described in claim 30. Thus this claim, together with claims 31 and 32 that depend therefrom, is allowable and Applicants respectfully solicit such allowance.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that each of the pending claims 1-32 is now in condition for allowance. Therefore, reconsideration of the rejection is requested and allowance of those claims is respectfully solicited. In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that can be clarified in a telephonic interview, the Examiner is respectfully requested to initiate the same with the undersigned attorney.

Dated this 23rd day of September, 2005.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Kevin W. Stinger", written over the typed name and registration information.

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C. AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figure 7. This sheet, which includes Figures 7 and 8, replaces the original sheet including Figures 7 and 8.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

Fig. 8